



NON CLEAN, SEWAGE & WASTEWATER COMBINATION AIR VALVE

Model C80

BERMAD C80 is a high quality combination air valve for a variety of sewage and wastewater networks and operating conditions. It evacuates air during pipeline filling, allows efficient release of air and gas pockets from pressurized pipes, and enables the intake of large volumes of air in the event of network draining.

The elongated - body and lower float - is designed to reduce the contact between the fluid and the upper mechanism.

With its advanced aerodynamic design, double orifice and Surge Protection device (optional), this valve provides excellent protection against air and gas accumulation and vacuum formation with improved sealing under low pressure conditions.

C80 is designed to facilitate longer periods of operation without maintenance and it is easy to maintain.



Features & Benefits

- Straight flow body with large diameter automatic orifice: Higher than usual air flow.
- Aerodynamic, full-body kinetic shield: Prevents premature closing without disturbing air intake or discharge.
- Dynamic Sealing: Prevents leakage under low pressure conditions (0.8 psi; 0.05 bar).
- Elongated body design: Prevents solids from making contact with valve's operating parts.
- Compact, simple and reliable structure with fully corrosion-resistant internal parts: Lower maintenance and increased life span.
- Two service ports: Enabling back flushing and drainage.
- Threaded Side outlet (3"; DN80) for connection of Surge Protection (SP) or Inflow prevention (IP) devices.
- Certified to the Australian functional standard for air valves (SAI AS4883).
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

Additional Features & Accessories

- Surge Protection (code SP): Smoother operation, preventing damage to the valve and the system.
- Inflow Prevention (code IP): Prevents intake of atmospheric air in cases where this could lead to damaged pumps, required re-priming, or disruption of siphon.
- Drainage Valve (code Z).

Typical Applications

- Pumping stations: Air relief and vacuum prevention.
- Non Clean Water pipelines: Protection against air and gas accumulation and vacuum formation at elevations, slope change points and road/river crossings.
- Wastewater Treatment plants: Air relief, protection against air and gas accumulation and vacuum formation.

Maintenance

- The air valve can be opened from the top and the internal assembly can be pulled up, for a quick service or replacement.
- 2 Service ports and the addition of an optional drainage valve enable back-flushing, testing and draining in the workshop as well as in the field.

Inlet and Outlet Connections

- Inlets: flanged 3-4"; DN80-100
- Outlets: Sideways or down, female threaded 3"; DN80

Operational Data

- Pressure Rating: 230 psi; ISO PN16, 360 psi; ISO PN25
- Minimum operating pressure: 0.8 psi; 0.05 bar
- Maximum operating pressure: 230 psi; 16 bar, 360 psi; 25 bar
- Media and operating temperature: Water, 33-140°F; 1-60°C



Materials

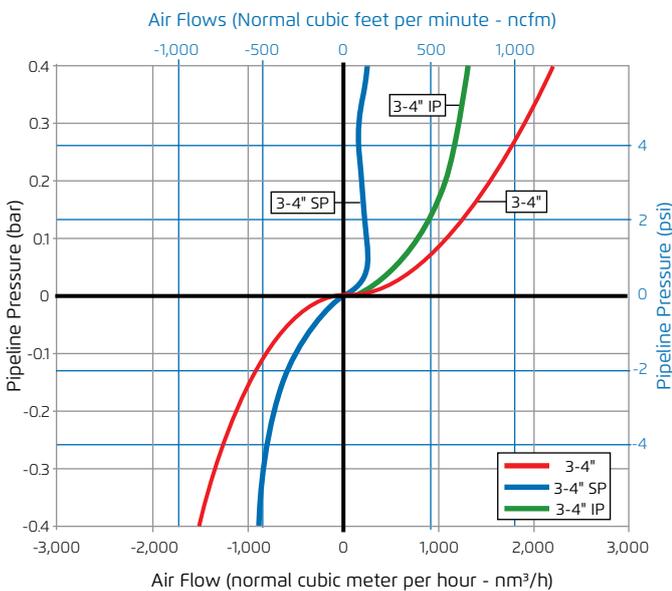
- Body and Cover: Ductile Iron
- Top Plate: Stainless Steel 316
- Upper Float Assembly: Polypropylene, Glass-Reinforced Nylon
- Main Float: Stainless Steel 316, tested to 800 psi; 55 bar
- Float Rod: Stainless Steel 316
- Elastomers: NBR, Neoprene
- Coating of Ductile Iron: Fusion Bonded Epoxy

Orifice Specifications

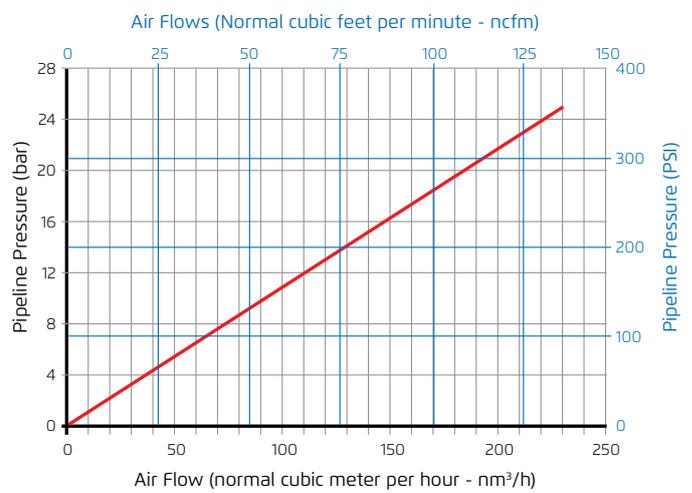
Inlet Sizes	Automatic Orifice	Kinetic Orifice		Surge Protection		
	Area	Diameter	Area	Number of holes	Hole Diameter	Total Area
Inch	Sq inch	inch	Sq inch	--	inch	Sq inch
mm	Sq mm	mm	Sq mm		mm	Sq mm
3"	0.029	3	7.069	5	0.236	0.219
DN80	18.5	80	5,027		6	141
4"	0.029	3	7.069	5	0.236	0.219
DN100	18.5	80	5,027		6	141

Air Flow Performance Charts

Air Relief and Intake (Pipeline Filling, Draining and Vacuum Conditions)



Air Release (Pressurized Operation)

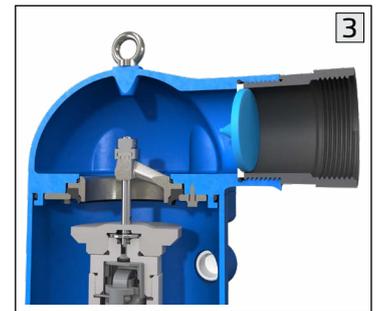
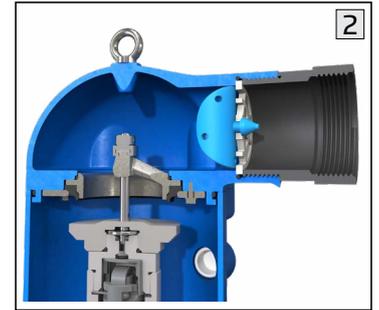
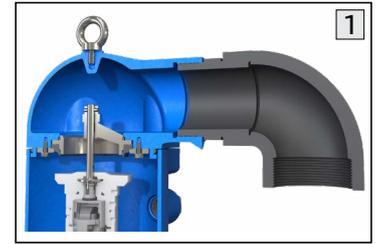
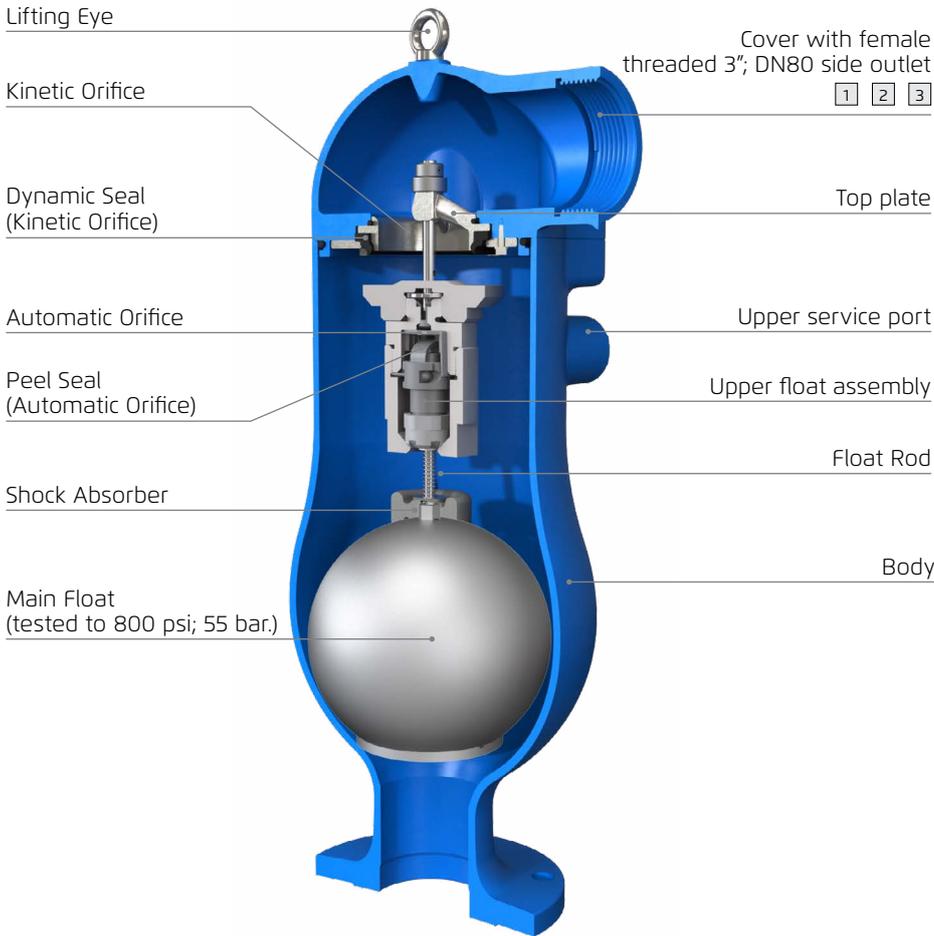


Data for C80 with Surge Protection Feature

Inlet Size	Switching Value	Air relief
Inch	psi	ncfm
mm	bar	nm³/h
3" - 4"	0.8	171
DN80 - 100	0.05	300

Air relief and intake charts are based on actual measurements, carried out in Bermad Air Flow test bench, according to EN-1074/4 and AS4883 standard and refer to Side outlet. Use Bermad Air software for optimized Sizing & Positioning of Air Valves.

Cutaway



Dimensions & Weights

		With 90 degree elbow (down outlet)			With SP or IP device (side outlet)		
Inlet Size	Connection	Width (D)	Height (H)*	Weight	Width (D)	Height (H)*	Weight
inch		inch	inch	lbs	inch	inch	lbs
mm		mm	mm	Kg	mm	mm	Kg
3"	Flanged	17.480	24.213	61.8	13.189	24.213	60.4
DN80		444	615	28.1	335	615	27.4
4"	Flanged	17.480	24.331	65.1	13.189	24.331	63.7
DN100		444	618	29.6	335	618	28.9

* For a height including lifting eye add 1.06"; 37 mm.

Easy maintenance

1. Open the bolts and pull out the cover and internal assembly.

2. Release the screw

3. Disassemble the upper part from the lower part by opening the thread.

